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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/717,704

11/19/2003

Christopher J. Cookson

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22440

7590

06/14/2006

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EXAMINER

DANIELSEN, NATHAN ANDREW

ART UNIT

PAPER NUMBER

2627

DATE MAILED: 06/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/717,704	<b>Applicant(s)</b> COOKSON ET AL.	
	<b>Examiner</b> Nathan Danielsen	<b>Art Unit</b> 2627	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 November 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. Claims 1-35 are pending.

***Drawings***

2. The drawings are objected to because: the output of buffer 132 in figure 2 lacks the appropriate label, such as the label "DATA OUT" shown in figure 3, and figure 11 has two elements both indicating that data from Side A is being sent to the processor when one should indicate that data from Side B is also being sent to the processor.
3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "first side having a first special section with data oriented along said first spiral and a second special section with data oriented along a third spiral oriented in a direction opposite that of said first spiral" as claimed in claim 32 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

4. The disclosure is objected to under 37 CFR 1.78(a)(2)(i) because of the following informalities: the listing of related applications contains only application titles without the corresponding application serial numbers. Appropriate correction is required.

***Claim Objections***

5. Claim 28 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 28 claims "the method of claim 27 wherein said step of determining includes determining the orientation of the disc" and claim 27 claims "determining the orientation of the disc".

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 2-9, 11-15, 17-19, and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2-9, 11-15, 17, and 18 recite the limitation "the player" in line 1 of each claim. Additionally, claim 3 recites the limitation "the special annular portion" in lines 4-5. There is insufficient antecedent basis for these limitations in the claims.

Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite because it is unclear what Applicant intends to claim, as indicated by "a mc" shown on the right side of page 43. For purposes of examination, this has been interpreted to mean "a motor capable of rotating the disc in said first direction or second direction in response to said controller commands".

Claim 21 recites the limitation "the attempt" in line 2. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 16 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Winter (US Patent 6,603,714).

Regarding claim 16, Winter discloses a player for reading an optical DVD disc having first and second sides comprising:

a controller generating controller commands;

a motor responsive to the controller commands; and

two read heads reading data from respective sides of the disc;

wherein said controller causes said motor to rotate said disc in one direction to read data on said first side and to rotate said disc in the opposite direction to read data on the second side (all limitations found in figure 3 and col. 1, lines 16-48).

Regarding claim 18, Winter discloses where the optical disc player further comprises a sensor adapted to detect the direction in which data is arranged on one of said sides, said sensor generating a signal to said controller (inherent in the apparatus disclosed in col. 1, lines 16-48).

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1, 2, 7, 9-11, 13-15, 20, 21, and 27-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Ishibashi et al (US Patent 6,850,479; hereinafter Ishibashi), in view of Hisakado et al (US Patent 5,406,534; hereinafter Hisakado).

Regarding claims 1, 10, 20, 21, 27, and 28, Ishibashi discloses an optical disc player and associated method (title) for playing an optical disc with a first side and a second side (inherent in all optical discs), said player comprising:

a controller determining a direction of rotation for the disc that allows data to be read from either side of the disc, said controller generating corresponding controller commands (disk type identification section 6 in figure 3);

a motor responsive to said controller commands to rotate the disc in said direction of rotation (motor 10 in figure 3); and

a read head disposed adjacent to said first side for reading data (optical head 2 in figure 3).

However, Ishibashi fails to disclose the specific structure and arrangement of the data on the disc, namely where the track configurations shown in figure 1 are located on two separate sides of the same disc.

In the same field of endeavor, Hisakado discloses where data is arranged on the data layer of said first side along a first spiral oriented in a first direction when viewed on said first side, and data is arranged on the data layer of said second side along a second spiral oriented in a direction opposite that of said first spiral when viewed on said second side (figure 3 and col. 3, lines 53-54).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the disk of Ishibashi with the disk structure of Hisakado, for the purpose of recording data on both sides simultaneously (col. 2, lines 23-26).

Regarding claims 2, 11, 15, 29, and 30, Ishibashi, in view of Hisakado, discloses everything claimed, as applied to claim 1. Additionally, Ishibashi discloses where the optical disc player further comprises a sensor monitoring the direction in which data is recorded on the disc, said sensor generating sensor signals used by said controller to generate said controller commands (the combination of the optical head 2 and disk type identification section 6 monitors the reproduction signal from the disc for the synchronization patterns shown in figure 4 (see col. 7, lines 26-46 for more detail)).

Regarding claims 7 and 13, Ishibashi, in view of Hisakado, discloses everything claimed, as applied to claim 1. Additionally, Ishibashi discloses where the optical disc player further comprises a manual switch operable by a user for controlling the direction in which said motor rotates the disc, said controller being coupled to said switch to generate said controller commands (suggested by col. 11, lines 40-45).

Regarding claim 9, Ishibashi, in view of Hisakado, discloses everything claimed, as applied to claim 1. However, Ishibashi fails to disclose two opposing read heads.

In the same field of endeavor, Hisakado discloses where the optical disc player further comprising a first and a second read head, each read head being positioned on a respective side of the disc (figure 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus of Ishibashi with the apparatus of Hisakado, for the purpose of recording data on both sides simultaneously (col. 2, lines 23-26).

Regarding claim 14, Ishibashi, in view of Hisakado, discloses everything claimed, as applied to claim 10. However, Ishibashi fails to disclose where the head assignments are reversed when the disc is inserted incorrectly.

In the same field of endeavor, Hisakado discloses where the optical disc player further comprises a second head, said first and second heads being assigned respectively to read the first and the second sides of the optical disc (figure 1), and wherein the side assignments of said first and

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second heads are reversed to read the second and first sides respectively in response to the controller commands (inherent when the disc is placed in the apparatus incorrectly and data is to be reproduced based on stored address information).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus of Ishibashi with the apparatus of Hisakado, for the purpose of recording data on both sides simultaneously (col. 2, lines 23-26).

12. Claims 3-6, 12, 19, 22-26, 31, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishibashi, in view of Hisakado, and further in view of Gotoh et al (US Patent 5,694,387; hereinafter Gotoh).

Regarding claims 3, 12, 22, 23, 26, 31, and 33, Ishibashi, in view of Hisakado, discloses everything claimed, as applied to claims 1, 10, 20, and 27. However, Ishibashi, in view of Hisakado, fails to disclose a special portion of the disc which is read first when the disc is inserted in the optical disc player.

In the same field of endeavor, Gotoh discloses where the disc includes a special portion in a predetermined location that is used to store data indicative of the characteristics of the disc (second area 3B in figures 2, 4, and 12), and wherein in response to the initial presence of the disc in the player, said controller sends a read command to said read head to read data from the special annular portion (col. 13, lines 55-65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the disc of Hisakado with the disc structure of Gotoh as well as the apparatus of Ishibashi with the disc-structure-related features of Gotoh, for the purpose of reliably determining the which side of the disc is facing the optical head when it is inserted in the apparatus (col. 3, lines 33-42).

Regarding claims 4, 5, 24, and 25, Ishibashi, in view of Hisakado, discloses everything claimed, as applied to claims 1 and 22. However, Ishibashi, in view of Hisakado, fails to disclose a



main portion and a special portion on the disc and where the special portion is read when no data is detected in the main portion.

In the same field of endeavor, Gotoh discloses where said disc includes a main portion (first area 3A) with program data arranged along said first spiral to allow data to be read from said main portion when said disc is rotated in said direction of rotation, and a special portion (second area 3B) with disc characteristic data arranged to be read when the disc is rotated in an opposite direction (figures 5 and 6 and col. 8, line 46 through col. 9, line 33), and wherein said controller sends a read command to said read head to read data in said special portion only when no data is detected in the main portion (col. 7, lines 34-37).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus of Ishibashi and the disc of Hisakado with the apparatus and disc of Gotoh, for the purpose of reliably determining the which side of the disc is facing the optical head when it is inserted in the apparatus (col. 3, lines 33-42).

Regarding claim 6, Ishibashi, in view of Hisakado, discloses everything claimed, as applied to claim 1. However, Ishibashi, in view of Hisakado, fails to disclose a visual display for showing disc characteristic data.

In the same field of endeavor, Gotoh discloses where the optical disc player further comprises a display showing information about the operation of the player and/or disc characteristics (col. 9, lines 60-63).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus of Ishibashi with the display of Gotoh, for the purpose of warning the user of an erroneous disc insertion (col. 9, lines 60-63).

Regarding claim 19, Ishibashi discloses an optical disc player for reading a disc having first and second sides, the player comprising:

a controller that issues controller commands (disk type identification section 6 in figure 3);

at least a first read head to read data from said first side of the disc (optical head 2 in figure 3);

a motor capable of rotating the disc in said first direction or second direction in response to said controller commands (motor 10 in figure 3);

wherein said controller generates said controller commands if no data is read from the disc (the combination of the optical head 2 and disk type identification section 6 monitors the reproduction signal from the disc for the synchronization patterns shown in figure 4 (see col. 7, lines 26-46 for more detail)).

However, Ishibashi fails to disclose fails to disclose the specific structure and arrangement of the data on the disc, namely where the track configurations shown in figure 1 are located on two separate sides of the same disc as well as a visual display.

In the same field of endeavor, Hisakado discloses where each side carries data arranged to be read only when the disc is rotating in a first direction and has a first orientation or the disc is rotating in a second direction and has a second orientation (figure 3 and col. 3, lines 53-54).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the disk of Ishibashi with the disk structure of Hisakado, for the purpose of recording data on both sides simultaneously (col. 2, lines 23-26).

In the same field of endeavor, Gotoh discloses where the optical disc player further comprises a display responsive to controller commands to display a message requesting that the disc be reversed (col. 9, lines 60-63).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus of Ishibashi with the display of Gotoh, for the purpose of warning the user of an erroneous disc insertion (col. 9, lines 60-63).

13. Claims 8, 34, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishibashi, in view of Hisakado, and further in view of Maeng (US Patent 5,596,563).

Regarding claim 8, Ishibashi, in view of Hisakado, discloses everything claimed, as applied to claim 1. However, Ishibashi, in view of Hisakado, fails to disclose where one optical head can read both sides of the optical disc.

In the same field of endeavor, Maeng discloses where the optical disc player further comprises a yoke that selectively switches said read head between said sides (figure 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus of Ishibashi with the apparatus structure of Maeng, for the purpose of playing both sides of a double-sided optical disc with a single pickup (abstract).

Regarding claims 34 and 35, Ishibashi discloses an optical disc player for reading an optical disc having a first side and a second side and direction indicia disposed on at least one of said first and second sides, said direction indicia being machine readable and being indicative of the direction in which the disc must be rotated to allow data to be read from at least one side, said optical disc player comprising:

- a motor rotating said disc selectively in one of a first and second directions; and

- a read head that can read data from one side when said read head is adjacent to said one side and the disc is rotated by the motor in one direction.

However, Ishibashi fails to disclose the specific structure and arrangement of the data on the disc, namely where the track configurations shown in figure 1 are located on two separate sides of the same disc and where one optical head can read both sides of the optical disc.

In the same field of endeavor, Hisakado discloses where each side includes at least a first data layer, wherein data is arranged on the data layer of said first side along a first spiral oriented in a first direction when viewed on said first side, and data is arranged on the data layer of said second side along a second spiral oriented in a direction opposite that of said first spiral when viewed on said second side (figure 3 and col. 3, lines 53-54).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the disk of Ishibashi with the disk structure of Hisakado, for the purpose of recording data on both sides simultaneously (col. 2, lines 23-26).

In the same field of endeavor, Maeng discloses a read head that can read data from one side when said read head is adjacent to said one side and the disc is rotated by the motor in one direction and can read data from the other side when read head is adjacent to said other side and the disc is rotated in the other direction (figure 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus of Ishibashi with the apparatus structure of Maeng, for the purpose of playing both sides of a double-sided optical disc with a single pickup (abstract).

Further regarding claim 35, Ishibashi discloses where the optical disc player further comprises:

a tracking monitor that tracks the tracking error associated with said read head (col. 11, lines 1-6);

wherein said motor reverses the direction of rotation of the disc if the tracking error from the tracking monitor is excessive (col. 11, lines 1-31 and figure 6A).

14. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Winter, in view of Ishibashi.

Regarding claim 17, Winter discloses everything claimed, as applied to claim 16. However, Winter fails to disclose a user-operated member coupled to the controller.

In the same field of endeavor, Ishibashi discloses where the optical disc player further comprises a user-operated member having a first and a second position and wherein said controller is coupled to said user-operated member to determine the direction of rotation of the disc (suggested by col. 11, lines 40-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus of Winter with the switch of Ishibashi, for the purpose of switching the direction of rotation of the disc (col. 11, lines 40-45).

15. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishibashi, in view of Hisakado, and further in view of Miyazaki et al (US Patent 5,754,509; hereinafter Miyazaki).

Regarding claim 32, Ishibashi, in view of Hisakado, discloses everything claimed, as applied to claim 27. However, Ishibashi, in view of Hisakado, fails to disclose where the disc has two special sections on one side, each with data contained in a spiral track of opposite orientations.

In the same field of endeavor, Gotoh discloses where said disc has on said first side a first special section with data oriented along said first spiral and a second special section with data oriented along a third spiral oriented in a direction opposite that of said first spiral, and wherein said step of detecting includes rotating the disc for reading the data on the first special section, attempting to read the data on the first special section, and if no data is found on the first special section, reversing the rotation of the disc and attempting to read the data on the second special section (figure 15, where the special inner spiral 1TI can be reproduced in one direction and, when the data in the special inner spiral 1TI runs out, the disc rotation direction would need to be reversed in order to reproduce the information in the special outer spiral 1TO).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the disc of Ishibashi as modified by Hisakado by including special sections on one side of the disc each with data contained in a spiral track of opposite orientations for the purpose of utilizing multiple heads for recording and/or reproducing information (col. 2, lines 40-44).

***Citation of Relevant Prior Art***

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Kudo et al (US Patent 5,656,348) disclose an optical recording medium (CD) and associated recording and reproducing apparatuses similar to those found in Miyazaki.

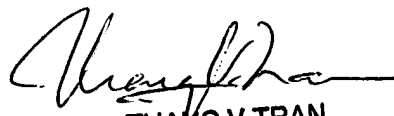
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Danielsen whose telephone number is (571) 272-4248. The examiner can normally be reached on Monday-Friday, 8:30 AM - 4:30 PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, A.L. Wellington can be reached on (571) 272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nathan Danielsen  
06/01/2006



THANG V. TRAN  
PRIMARY EXAMINER